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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/766,875	01/30/2004	Hironori Suzuki	018677-0121	4095

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FOLEY AND LARDNER
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WASHINGTON, DC 20007

EXAMINER

HANSEN, COLBY M

ART UNIT	PAPER NUMBER
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3682

DATE MAILED: 05/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/766,875

Applicant(s)

SUZUKI ET AL.

Examiner

Colby Hansen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) 4, 13-16 and 19-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-12, 17, 18, and 23-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-3, 5-12, 17-18, and 23-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With regard to claim 1, applicant claims “wherein if the number of the rolling members of the rolling bearings is z and if the number of the cutouts is n , then n does not equal z and n does not equal z plus/minus 1”. Applicant’s use of the word “if” renders the claim indefinite, as it is unclear whether the “ z ” and “ n ” variables do, or do not, represent the number of rolling member and the number of cutouts, respectively.

With regard to claim 28, applicant claims that n is less than or equal to $2Z$. If n is equal to 2 and z is equal to 1, the relationship is met, but such a relationship would teach against the presumed relationships set forth in claim 1. It is unclear whether the relationships are independent of one another or if they are intended to be used in congress with one another.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 5-8, 17, 18, and 23-28, and best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Hallerback '030 in view of West '734.

Hallerback '030 discloses a rolling bearing with shield plate (made from a group consisting of metal) comprising an outer ring 1 having an outer ring raceway (fig. 1) and an anchor groove 4 formed on an inner peripheral surface thereof, the anchor groove 4 being circumferentially provided at an axial end portion separated from the outer ring raceway 1 and having an outside facing side surface (fig. 1), an inner ring 2 having an inner ring raceway formed on an outer peripheral surface thereof, a plurality of rolling members 3 rotatably positioned between the outer ring raceway (fig. 1) and the inner ring raceway (fig. 1), and a shield plate 5 formed in a generally circular ring shape and provided with an inner facing, radial outer portion (fig. 1) and an outer peripheral edge portion 6 anchored in the anchor groove 4 on the inner peripheral surface of the outer ring 1 at the axial end portion of the outer ring 1, the shield plate 5 having an elastic seal member 7 formed of a curable polymer substance (col. 1/lines 43-50 discloses any suitable elastic element which would inherently include a curable polymer substance) with adhesive property in a solid state (as broadly recited all materials have some sort of adhesive property, whether it be easy to adhere to another material or not easy to adhere to another material) and attached circumferentially to the radial outer portion of the shield plate 5, the elastic member 7 being disposed slightly radially inwardly with respect to the outer peripheral edge portion 6 of the shield plate 5, such that the seal member 7 is elastically held between the radial outer portion of the shield plate 5 ($D_{18} > R_6 > R_{18} > R_{21}$) and the outside facing side surface of the anchor groove 4. The anchor groove 4 has a generally circumferential end edge portion (fig. 1) contacting a widthwise central portion of the seal member 7, wherein the seal member 7 is attached at a location satisfying the following condition where the outer diameter of the seal member (top of seal 7) is greater than the inner diameter of the outer ring (part that contacts the

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seal member) which is greater than the inner diameter of the seal member (bottom of seal member 7) which is greater than the inner diameter of the radially outer portion of the shield plate (the corner of the shield plate 5 just below the bottom of the seal member where it starts to bend out); the side facing side surface of the anchor groove facing the seal member as at least one concavity (fig. 1). Regarding the limitation set forth that the relationship between n (number of cuts) and Z (number of rolling members) must not be either $n=Z$ **and** $n=Z$ plus/minus 1, applicant limitation is essentially a very broad negative limitation that incorporates all possible numerical relationships between the cuts and bears except for a three bearing range (later in claim 28, claiming n is less than or equal to $2Z$, which is unclear if it is used separately or in congress with the relationships of claim 1). As disclosed in the drawings of Hallerback '030, it is clearly shown that there are many more cuts than there are bearings (while it is known that the drawings are not to scale, such an clarion difference is part of the disclosure, such that is clear that Hallerback '030 discloses a relationship wherein the cuts are not equal to the bearings and the cuts are not equal to the bearings plus/minus one and wherein a n less than or equal to $2Z$ is possible and therefor inherently incorporated by the range of Hallerback '030). Additionally, the broad formula range of applicant's invention have the physical appearance of being generally the same to those of Hallerback '030, and we find no evidence of criticality of any of the recited cuts/bearing parameters in this record. Criticality of these parameters must be established before such distinctions may be relied upon as evidence of unobviousness. Compare *In re Fields*, 304 F.2d 691, 784 OG8, 134 USPQ 242 (CCPA, 1962); *In re Russell*, 439 F.2d 1228 169 USPQ 426 (CCPA, 1971). Furthermore, while the relationship between the cuts and the bearings, as claimed by the applicant, is not explicitly stated within the specification (but is clearly supported by the drawings), it would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the broad range as claimed by applicant in order to conform the bearing to a specific intended use that is size sensitive (i.e. wheel bearing, lathe

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bearing, etc.), since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

However, Hallerback '030 does not explicitly state that the elastic seal member does not extend radially beyond an outer edge of the inside facing radial outer portion of the shield plate and integrally attached to the outer portion of the shield plate.

West '734 discloses an elastic seal member 48, with adhesive property (as broadly recited all materials have some sort of adhesive property, whether it be easy to adhere to another material or not easy to adhere to another material) integrally attached (column 2, lines 50-55) to the radial outer portion of the shield plate 44.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the seal member in Hallerback '030 by integrally attaching it to the shield plate as per the teachings of West '734, since this would have aided in the assembly of the bearing by not allowing the seal member to get misaligned. It also would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified Hallerback such that the elastic member would not extend beyond the shield plate so as to protect against wear to the seal due to radial misalignment caused by mistakes in manufacturing or shock forces to the bearing apparatus.

With regard to claims 5 and 6, these process limitations do not structurally define over Hallerback '030 or West '734.

Furthermore, Hallerback '030 and West '734 discloses the claimed invention except for the elastic member having a viscosity in the range of 8000 plus or minus 2000cPs at 25 degrees C. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use an elastic material with a viscosity in that range, since it has been held to be

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within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended used. *In re Leshin*, 125 USPQ 416.

Furthermore, Hallerback '030 and West '734 disclose every limitation except for the thickness of the seal member is in the range from 0.02mm to 0.5mm, more specifically, 0.04mm to 0.2mm. It has been held that, where the only difference between the prior art and the claims is a recitation of relative dimensions and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device is not patentably distinct from the prior art. M.P.E.P. 2144.04(IV)(A). Here, applicant has not demonstrated how this size limitation would perform differently than the prior art. Therefore, this limitation of size does not structurally define over the references.

Claims 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hallerback '030 in view of West '734 as applied to claims 1-3, 5-8, 17-18 and 23-28 above, and further in view of Tomoda (U.S. Patent No. 4,339,565).

Hallerback '030 discloses the claimed invention except for the use of a coating for the rubber having a non-affinity for oil wherein the substance is fluorine.

Tomoda '565 discloses a substrate of material (as broadly recited, rubber is a suitable material for the substrate(col.4/line9)) having an internal composition and outer coating of a substance (the covering of the fluorine-containing epoxy and the fluorinated rubber) having substantially non-affinity for oil (inherent to fluorine), wherein the substance is fluorine.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the fluorinated rubber of Tomoda '565 for the seal member

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of Hallerback '030 so as to improve heat resistance, oil resistance, solvent resistance, chemical resistance, as disclosed by Tomoda '565 in col. 1, lines 10-20.

Response to Arguments

Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's original use of the "or" statement with regard to n not equal to Z , *or* n not equal to Z plus/minus one was inherently anticipated by Hallerback '030 (applicant's range was all possible integers). Applicant's amendment to utilize an "and" statement precipitated a new interpretation of Hallerback '030, as explained in the above rejection.

FACSIMILE TRANSMISSION

Submission of your response by facsimile transmission is encouraged. Group 3600's facsimile number is **(703) 872-9306**. Recognizing the fact that reducing cycle time in the processing and examination of patent applications will effectively increase a patent's term, it is to your benefit to submit responses by facsimile transmission whenever permissible. Such submission will place the response directly in our examining group's hands and will eliminate Post Office processing and delivery time as well as the PTO's mail room processing and delivery time. For a complete list of correspondence not permitted by facsimile transmission, see M.E.P..

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502.01. In general, most responses and/or amendments not requiring a fee, as well as those requiring a fee but charging such fee to a deposit account, can be submitted by facsimile transmission. Responses requiring a fee which applicant is paying by check **should not be** submitting by facsimile transmission separately from the check.

Responses submitted by facsimile transmission should include a Certificate of Transmission (M.E.P.. 512). The following is an example of the format the certification might take:

I hereby certify that this correspondence is being facsimile transmitted to the Patent and Trademark Office (Fax No. (703) 872-9306) on _____

(Date)

Typed or printed name of person signing this certificate:

(Signature)

If your response is submitted by facsimile transmission, you are hereby reminded that the original should be retained as evidence of authenticity (37 CFR 1.4 and M.E.P.. 502.02). Please do not separately mail the original or another copy unless required by the Patent and Trademark Office. Submission of the original response or a follow-up copy of the response after your

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response has been transmitted by facsimile will only cause further unnecessary delays in the processing of your application; duplicate responses where fees are charged to a deposit account may result in those fees being charged twice.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

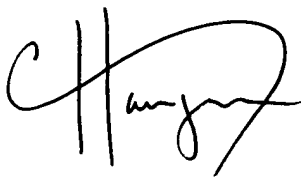
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Colby Hansen whose telephone number is (703) 305-1036. The examiner can normally be reached on Monday through Thursday and every other Friday from 7:30 PM to 5:00 PM (EST).

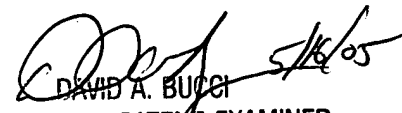
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bucci, can be reached on (571) 272-7099. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-7105.

Colby M. Hansen

Patent Examiner

 5/12/05


DAVID A. BUCCI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600